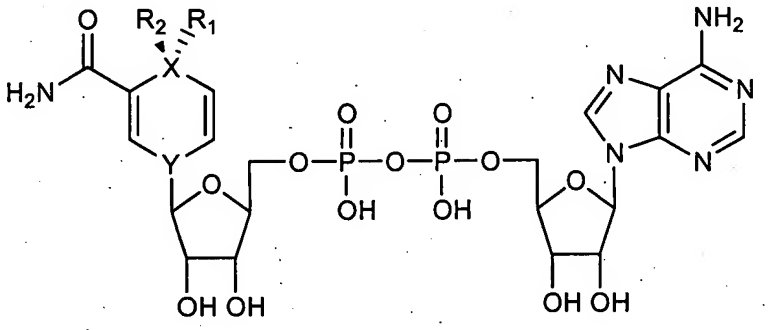
What is claimed is:

1. A method for inhibiting, reversing or eliminating an infection of a eukaryotic cell by a mycobacterium, comprising the step of contacting the cell with an antimycobacterial compound that is an inhibitor of a mycobacterium-specific enzyme, wherein the compound has the formula:



wherein X is C or O;

Y is N or C;

R1 and R2 are independently absent or H, CH_3, CH_2-CH_3, or $O(CH_2)_3O$ or together are =O, $=CH_2$, -CH_2-CH_2-, =CH-CH=CH_2, =CH-$COOCH_2$-CH_3, -CH_2-$(CH_2)_3$-CH_2- or OCH_2.

2. The method of claim 1 wherein the compound has the formula C1, wherein X is C, Y is N and R1 and R2 are together pentyl.

3. The method of claim 1 wherein the compound has the formula C2, wherein X is C, Y is N and each of R1 and R2 are methyl.

4. The method of claim 1 wherein the compound has the formula C3, wherein X is O, Y is C and R1 and R2 are absent.

5. The method of claim 1 wherein the compound has the formula C4, wherein X is C, Y is N and R1 and R2 are together =O.

6. The method of claim 1 wherein the compound has the formula C5, wherein X is

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C, Y is N and R1 and R2 are each H.

7. The method of claim 1 wherein the compound has the formula S1, wherein X is C, Y is O and R1 and R2 are together $=CH_2$.

8. The method of claim 1 wherein the compound has the formula S2, wherein X is C, Y is N and R1 and R2 are together $=CH-CH=CH_2$.

9. The method of claim 1 wherein the compound has the formula S3, wherein X is C, Y is N and R1 and R1 are together $-CH_2-CH_2-$.

10. The method of claim 1 wherein the compound has the formula S4, wherein X is C, Y is N and R1 and R2 are together $=CH-COOCH_2-CH_3$.

11. The method of claim 1 wherein the compound has the formula S5, wherein X is C, Y is N and R1 and R2 are together $-O-CH_2-$.

12. A method according to any of claims 1 through 11 wherein the compound is derivatized by covalently linking a derivatizing group on a portion of the compound required for binding to an NAD-requiring enzyme.

13. A method according to claim 12, wherein the derivatizing group is a urea moiety.

14. A method according to claim 12, wherein the derivatized portion of the compound is the formamide group of the nicotinamide component thereof or and 1-amino group of the adenine component thereof.

15. A method according to any of claims 1 through 11, wherein the cell is contacted with a pharmaceutical composition comprising the compound and a pharmaceutically acceptable carrier.

16. A method according to claim 15, wherein the eukaryotic cell is an animal cell.

17. A method according to claim 16, wherein the animal cell is a human cell.

18. A method according to claim 15 wherein the mycobacterium is a tuberculosis-causing microorganism.

19. A method according to claim 18 wherein the cell is a human cell.

20. A method according to claim 19 wherein the human cell is a phagocytic cell.

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